

## LABOR SERVICES DIVISION[875]

### Notice of Intended Action

**Twenty-five interested persons, a governmental subdivision, an agency or association of 25 or more persons may demand an oral presentation hereon as provided in Iowa Code section 17A.4(1)"b."**

**Notice is also given to the public that the Administrative Rules Review Committee may, on its own motion or on written request by any individual or group, review this proposed action under section 17A.8(6) at a regular or special meeting where the public or interested persons may be heard.**

Pursuant to the authority of Iowa Code section 89.14, the Boiler and Pressure Vessel Board hereby gives Notice of Intended Action to amend Chapter 80, "Boiler and Pressure Vessel Board Administrative and Regulatory Authority," Chapter 90, "Administration of the Boiler and Pressure Vessel Program," Chapter 91, "General Requirements for All Objects," Chapter 92, "Power Boilers," Chapter 93, "Miniature Boilers Installed Prior to September 20, 2006," Chapter 94, "Steam Heating Boilers, Hot Water Heating Boilers and Hot Water Supply Boilers," and Chapter 96, "Pressure Vessels," Iowa Administrative Code.

The proposed amendments update references to various national consensus codes; rescind unnecessary rules; change the requirements for combustion air; add rules pertaining to certificates of noncompliance issued by the Iowa centralized collection unit of the Iowa Department of Revenue; change the board membership; add definitions of "power boiler" and "unfired steam pressure vessel"; and make technical and editorial changes.

The purposes of these amendments are to update the rules due to statutory changes and changes in national codes; to implement changes identified by board members during the required rules review; to make the rules easier to read; to protect the safety of the public; and to implement legislative intent.

If requested in accordance with Iowa Code section 17A.4(1)"b" by the close of business on September 15, 2009, a public hearing will be held on September 16, 2009, at 1:30 p.m. in the Stanley Room at 1000 East Grand Avenue, Des Moines, Iowa. Interested persons will be given the opportunity to make oral statements and file documents concerning the proposed amendments. The facility for the oral presentations is accessible to and functional for persons with physical disabilities. Persons who have special requirements should call (515)242-5869 in advance to arrange access or other needed services.

Written data, views, or arguments to be considered in adoption shall be submitted by interested persons no later than September 16, 2009, to the Division of Labor Services, 1000 East Grand Avenue, Des Moines, Iowa 50319-0209. Comments may be sent electronically to [kathleen.uehling@iwd.iowa.gov](mailto:kathleen.uehling@iwd.iowa.gov).

These amendments are intended to implement Iowa Code chapters 89 and 272D and 2009 Iowa Acts, House File 720.

The following amendments are proposed.

ITEM 1. Amend subrule 80.3(2) as follows:

**80.3(2)** The eight appointed members of the board shall include:

- a. One member who is a special inspector and who is employed by an insurance company and commissioned to inspect boilers and pressure vessels.
- b. ~~Two members~~ One member from a certified employee organizations, one of whom organization who shall represent steamfitters.
- c. Two members who are mechanical engineers who regularly practice in the area of boilers and pressure vessels.
- d. One member who is a boiler and pressure vessel distributor.
- e. One member who represents boiler and pressure vessel manufacturers.
- f. One member who is a mechanical contractor engaged in the business of installation, renovation, and repair of boilers and pressure vessels.

g. One member from a certified employee organization who shall represent boilermakers.

ITEM 2. Amend rule 875—90.2(89,261,252J), parenthetical implementation statute, as follows:

**875—90.2(89,261,252J,272D) Definitions.**

ITEM 3. Amend rule **875—90.2(89,261,252J,272D)**, definition of “Certificate of noncompliance,” as follows:

*“Certificate of noncompliance”* means ~~a certificate of noncompliance with child support payment obligations issued by the child support recovery unit, department of human services, pursuant to Iowa Code chapter 252J or a certificate of noncompliance with student loan repayment obligations issued by the college student aid commission pursuant to Iowa Code chapter 261;~~

1. A certificate of noncompliance issued by the child support recovery unit, department of human services, pursuant to Iowa Code chapter 252J;

2. A certificate of noncompliance issued by the college student aid commission pursuant to Iowa Code chapter 261; or

3. A certificate of noncompliance issued by the centralized collection unit of the department of revenue pursuant to Iowa Code chapter 272D.

ITEM 4. Rescind the definition of “Pressure vessel” in rule **875—90.2(89,261,252J,272D)**.

ITEM 5. Adopt the following new definitions of “Power boiler” and “Unfired steam pressure vessel” in rule **875—90.2(89,261,252J,272D)**:

*“Power boiler”* means a boiler in which steam or other vapor is generated at a pressure of more than 15 pounds per square inch or a water boiler intended for operation at pressures in excess of 160 pounds per square inch or temperatures in excess of 250 degrees Fahrenheit.

*“Unfired steam pressure vessel”* means a vessel or container used for the containment of steam pressure either internal or external in which the pressure is obtained from an external source.

ITEM 6. Rescind and reserve rule **875—90.4(89)**.

ITEM 7. Amend subrule 90.6(1) as follows:

**90.6(1) General.** All boilers and unfired steam pressure vessels covered by Iowa Code chapter 89 shall be inspected according to the requirements of the National Board Inspection Code ~~(2004)~~ (2007 with 2008 addenda), which is hereby adopted by reference. A division inspector or special inspector must perform the inspections.

ITEM 8. Amend subrule 90.6(7) as follows:

**90.6(7) Imminent danger.** If the labor commissioner determines that continued operation of an object constitutes an imminent danger that could seriously injure or cause death to any person, notice to immediately cease operation of that object shall be posted by the labor commissioner. Upon such notice, the owner shall immediately begin the necessary steps to cease operation of the object. The object shall not be used until the necessary repairs have been completed and the object has passed inspection. Operation of an object in violation of this subrule may result in further legal action pursuant to Iowa Code ~~section~~ sections 89.11 ~~as amended by 2007 Iowa Acts, House File 368, section 7, and Iowa Code section 89.14 as amended by 2007 Iowa Acts, House File 368, section 8 and 89.13.~~

ITEM 9. Amend subrule 90.9(9), introductory paragraph, as follows:

**90.9(9) Procedures.** The following procedures shall apply except in the event of revocation or suspension due to receipt of a certificate of noncompliance. In instances involving receipt of a certificate of noncompliance, the applicable procedures of Iowa Code chapter 252J, ~~or 261,~~ or 272D shall apply.

ITEM 10. Amend **875—Chapter 90**, implementation sentence, as follows:

These rules are intended to implement Iowa Code chapters 17A, 89, 252J, ~~and 261,~~ and 272D.

ITEM 11. Rescind rule 875—91.1(89) and adopt the following **new** rule in lieu thereof:

**875—91.1(89) Codes adopted by reference.**

**91.1(1) ASME boiler and pressure vessel codes adopted by reference.** The ASME Boiler and Pressure Vessel Code (2007 with 2008 addenda) is adopted by reference. Regulated objects shall be designed and constructed in accordance with the ASME Boiler and Pressure Vessel Code (2007 with 2008 addenda) except for objects that meet one of the following criteria:

- a. An object with an ASME stamp and National Board Registration that establish compliance with an earlier version of the ASME Boiler and Pressure Vessel Code;
- b. An object within the scope of 875—Chapter 95;
- c. An object with an ASME stamp and National Board Registration that establish compliance with DIN, BSI, JIS, or CSA;
- d. A miniature boiler installed before March 31, 1967;
- e. A power boiler or unfired steam pressure vessel installed before July 4, 1951; or
- f. A steam heating boiler, hot water heating boiler, or hot water supply boiler installed before July 1, 1960.

**91.1(2) Inspection code adopted by reference.** The National Board Inspection Code (2007 with 2008 addenda) is adopted by reference, and reinstallations, installations, alterations, and repairs after November 25, 2009, shall comply with it.

**91.1(3) Electric code adopted by reference.** The National Electric Code (2008) is adopted by reference, and reinstallations and installations after November 25, 2009, shall comply with it.

**91.1(4) Piping codes adopted by reference.** The Power Piping Code, ASME B31.1 (2007 with 2008 addenda), and the Building Services Piping Code, ASME B31.9 (2008), are adopted by reference, and reinstallations and installations after November 25, 2009, shall comply with them up to and including the first valve.

**91.1(5) Control and safety device code adopted by reference.** Controls and Safety Devices for Automatically Fired Boilers (CSD-1) (2009) is adopted by reference, and reinstallations and installations after November 25, 2009, shall comply with it.

**91.1(6) Mechanical code adopted by reference.** Excluding Section 701.1, Chapters 2 and 7 of the International Mechanical Code (IMC) (2009) are adopted by reference effective January 1, 2010.

**91.1(7) Oil burning equipment code adopted by reference.** National Fire Protection Association Standard for the Installation of Oil Burning Equipment, NFPA 31 (2006), is adopted by reference.

**91.1(8) Fuel gas code adopted by reference.** National Fire Protection Association National Fuel Gas Code, NFPA 54 (2009), is adopted by reference.

**91.1(9) Liquefied petroleum gas code adopted by reference.** National Fire Protection Association Liquefied Petroleum Gas Code, NFPA 58 (2008), is adopted by reference.

**91.1(10) Boiler and combustion systems hazards code adopted by reference.** National Fire Protection Association Boiler and Combustion Systems Hazards Code, NFPA 85 (2007), is adopted by reference.

ITEM 12. Amend rule 875—91.4(89) as follows:

**875—91.4(89) Blowoff equipment.** The blowdown from an object that enters a sanitary sewer system or blowdown that is considered a hazard to life or property shall pass through ~~some form of~~ blowoff equipment that will reduce pressure and temperature. The temperature of the water leaving the blowoff equipment shall not exceed 150 degrees F, ~~and the Fahrenheit.~~ If the local jurisdiction has a temperature limit of less than 150 degrees Fahrenheit, the temperature of the water leaving the blowoff equipment shall comply with the limit set by the local jurisdiction. The pressure of the water leaving the blowoff equipment shall not exceed 5 psig. The blowoff piping and fittings between the object and the blowoff tank shall comply with the construction or installation code. All materials used in the fabrication of object blowoff equipment shall comply with the construction or installation code. All blowoff equipment shall be equipped with openings to facilitate cleaning and inspection.

ITEM 13. Rescind and reserve subrules **91.6(2)** and **91.6(3)**.

ITEM 14. Rescind subrules **91.13(3)** to **91.13(7)**.

ITEM 15. Adopt the following **new** subrules 91.13(3) and 91.13(4):

**91.13(3) National combustion air standards.**

*a. Installations and reinstallations.* Installations and reinstallations shall comply with the edition of NFPA 31, NFPA 54, NFPA 58, NFPA 85, or IMC currently adopted at rule 875—91.1(89) or with the Iowa combustion air standard in subrule 91.13(4). However, compliance with one of the listed NFPA codes constitutes compliance with this rule only if the object burns the fuel covered by the NFPA.

*b. Existing objects.* An adequate supply of combustion air shall be maintained for all objects while in operation. Compliance with the current edition of NFPA 31, NFPA 54, NFPA 58, NFPA 85, or IMC as adopted at rule 875—91.1(89) or with subrule 91.13(4) constitutes compliance with this rule. Compliance with an earlier edition of NFPA 31, NFPA 54, NFPA 58, NFPA 85, or IMC constitutes compliance with this rule. However, compliance with one of the listed NFPA codes constitutes compliance with this rule only if the object burns the fuel covered by the NFPA. Compliance with an earlier version of Iowa’s combustion air rule constitutes compliance with this rule. Earlier versions of Iowa’s combustion air rule are available for reference at [http://www.iowaworkforce.org/labor/boiler\\_inspection\\_.htm](http://www.iowaworkforce.org/labor/boiler_inspection_.htm).

**91.13(4) Iowa combustion air standard.** A permanent source of outside air shall be provided for each room to permit satisfactory combustion of fuel and ventilation if necessary under normal operations. The minimum ventilation for coal, gas, or oil burners in rooms containing objects is based on the Btu’s per hour, required air, and louvered area. The minimum net louvered area shall not be less than 1 square foot. The following table shall be used to determine the net louvered area in square feet:

INPUT (Btu’s per hour)	MINIMUM AIR REQUIRED (cubic feet per minute)	MINIMUM LOUVERED AREA (net square feet)
500,000	125	1.0
1,000,000	250	1.0
2,000,000	500	1.6
3,000,000	750	2.5
4,000,000	1,000	3.3
5,000,000	1,200	4.1
6,000,000	1,500	5.0
7,000,000	1,750	5.8
8,000,000	2,000	6.6
9,000,000	2,250	7.5
10,000,000	2,500	8.3

When mechanical ventilation is used, the supply of combustion and ventilation air to the objects and the firing device shall be interlocked with the fan so the firing device will not operate with the fan off. The velocity of the air through the ventilating fan shall not exceed 500 feet per minute, and the total air delivered shall be equal to or greater than shown above.

ITEM 16. Adopt the following **new** rules 875—91.18(89) to 875—91.20(89):

**875—91.18(89) National Board registration.** Except for cast iron boilers, cast aluminum boilers, and objects governed by 875—Chapter 95, all objects shall be registered with the National Board.

**875—91.19(89) ASME stamp.** Except for water heaters regulated by 875—Chapter 95, all objects shall bear the appropriate ASME stamp. Objects shall not be utilized in a manner inconsistent with the stamp.

**875—91.20(89) CSD-1 Report.**

**91.20(1)** The installer shall complete a Manufacturer's/Installing Contractor's Report for ASME CSD-1 (CSD-1 Report) for each object except for the following:

- a. An object within the scope of 875—Chapter 95;
- b. An object within the scope of 875—Chapter 96; or
- c. A hot water supply boiler covered by ASME Section IV, Part HLW.

**91.20(2)** The owner shall make the CSD-1 Report available for inspection.

ITEM 17. Rescind rule 875—92.2(89) and adopt the following **new** rule in lieu thereof:

**875—92.2(89) Codes adopted by reference.** The codes listed in 875—Chapter 91 apply to objects covered by this chapter.

ITEM 18. Rescind and reserve rule **875—92.3(89)**.

ITEM 19. Amend **875—Chapter 93**, title, as follows:

MINIATURE POWER BOILERS INSTALLED PRIOR TO SEPTEMBER 20, 2006

ITEM 20. Rescind rule 875—93.2(89) and adopt the following **new** rule in lieu thereof:

**875—93.2(89) Codes adopted by reference.** The codes listed in 875—Chapter 91 apply to objects covered by this chapter.

ITEM 21. Amend rule 875—93.5(89) as follows:

**875—93.5(89) Steam stop valves.** Each steam line from a miniature power boiler shall be provided with a stop valve located as close to the boiler shell or drum as is practicable except when the boiler and steam receiver are operated as a closed system.

ITEM 22. Amend rule 875—93.6(89) as follows:

**875—93.6(89) Water gages.**

**93.6(1)** Miniature power boilers for operation with a definite water level shall be equipped with a glass water gage for determining the water level. The lowest permissible water level for vertical boilers shall be at a point one-third of the height of the shell above the bottom head or tube sheet. When the boiler is equipped with an internal furnace, the water level shall not be less than one-third of the length of the tubes above the top of the furnace tube sheet. In the case of small boilers operated in a closed system where there is insufficient space for the usual glass water gage, water level indicators of the glass bull's eye type may be used.

**93.6(2)** Miniature power boilers shall have the lowest visible part of the water gage glass located at least 1 inch above the lowest permissible water level specified by the manufacturer.

ITEM 23. Amend subrule 93.7(1) as follows:

**93.7(1)** Except for miniature power boilers operating without the extraction of steam, miniature power boilers shall be provided with at least one feed pump or other feeding device unless the boiler feed line is connected to a water main carrying sufficient pressure to feed the boiler. In the latter case, in lieu of a feeding device, a suitable connection or opening shall be provided to fill the boiler when cold. Such connection shall be no less than ½-inch pipe size for iron or steel pipe and ¼ inch for brass or copper pipe.

ITEM 24. Amend rule 875—93.8(89) as follows:

**875—93.8(89) Blowoff.** Miniature power boilers shall be equipped with a blowoff connection, not less than ½-inch pipe size, located to drain from the lowest water space practicable. The blowoff shall be equipped with a valve or cock not less than ½-inch pipe size.

ITEM 25. Amend rule 875—93.9(89) as follows:

**875—93.9(89) Washout openings.** Miniature power boilers exceeding 12 inches internal diameter or having more than ten square feet of heating surface shall be fitted with not less than three brass washout plugs of 1-inch pipe size that shall be screwed into openings in the shell near the bottom. In miniature power boilers of the closed type system heated by removable internal electric heating elements, the openings for these elements when suitable for cleaning purposes may be substituted for washout openings. Boilers not exceeding 12 inches internal diameter and having less than ten square feet of heating surface need not have more than two 1-inch openings for cleanouts, one of which may be used for the attachment of the blowoff valve; these openings shall be opposite each other where possible. All threaded openings shall be opposite each other where possible. All threaded openings in the boiler shall be provided with a riveted or welded reinforcement to give four full threads therein.

Electric boilers of a design employing a removable top cover flange for inspection and cleaning need not be fitted with washout openings.

ITEM 26. Amend rule 875—93.10(89) as follows:

**875—93.10(89) Fixtures and fittings.** All valves, pipe fittings, and appliances connected to a miniature boiler shall be equal to at least the minimal requirements of the construction or installation code; and shall be rated for not less than the maximum allowable working pressure of the miniature power boiler; ~~and in.~~ In no case will shall the rating be for less than 125 pounds.

ITEM 27. Rescind rule 875—94.2(89) and adopt the following new rule in lieu thereof:

**875—94.2(89) Codes adopted by reference.** The codes listed in 875—Chapter 91 apply to objects covered by this chapter.

ITEM 28. Adopt the following new subrule 94.3(9):

**94.3(9) Low-water fuel cutoff.**

a. Each automatically fired hot water heating boiler shall have an automatic low-water fuel cutoff which has been designed for hot water service, and it shall be so located as to automatically cut off the fuel supply when the surface of the water falls to the level established.

b. As there is no normal waterline to be maintained in a hot water heating boiler, any location of the low-water fuel cutoff above the lowest safe permissible water level established by the boiler manufacturer is satisfactory.

c. A coil-type boiler or a watertube boiler requiring forced circulation to prevent overheating of the coils or tubes shall have a flow-sensing device installed in the outlet piping in lieu of the low-water fuel cutoff to automatically cut off the fuel supply when the circulating flow is interrupted.

ITEM 29. Rescind and reserve subrule **94.5(4)**.

ITEM 30. Amend **875—Chapter 96**, title, as follows:

**UNFIRED STEAM PRESSURE VESSELS**

ITEM 31. Rescind rule 875—96.1(89) and adopt the following new rule in lieu thereof:

**875—96.1(89) Codes adopted by reference.** The codes listed in 875—Chapter 91 apply to objects covered by this chapter.

ITEM 32. Amend paragraph **96.2(1)“a”** as follows:

a. The maximum allowable working pressure for code-stamped unfired steam pressure vessels shall be determined in accordance with the applicable provisions of the ASME Code or American Petroleum Institute ~~ASME~~ Code under which they were constructed and stamped.

ITEM 33. Amend paragraph **96.2(1)“b,”** introductory paragraph, as follows:

b. The maximum allowable working pressure on the shell of unfired steam pressure vessels without a code stamp shall be determined by the following equation.

ITEM 34. Amend paragraph **96.2(1)“c”** as follows:

c. The maximum allowable working pressure for noncode pressure vessels subjected to external or collapsing pressure shall be determined by the ASME Code, Section VIII, ~~Divisions 1, 2 and 3 (1998 with 1999 and 2000 addenda)~~.

ITEM 35. Amend subrule 96.2(2) as follows:

**96.2(2) *Factor of safety.*** The inspector shall increase the factor of safety if the conditions and safety of the unfired steam pressure vessel demand it.

ITEM 36. Amend subrule 96.2(3) as follows:

**96.2(3) *End closures.*** The maximum allowable working pressure permitted for formed heads under pressure shall be determined by using the formulas in ASME Code, Section VIII, ~~Divisions 1, 2 and 3 (1998 with 1999 and 2000 addenda)~~.

ITEM 37. Amend subrule 96.2(4) as follows:

**96.2(4) *Safety appliances.*** Each unfired steam pressure vessel shall be protected by such safety and relief valves and indicating and controlling devices as will ensure its safe operation. Valves shall not readily be rendered inoperative. The relieving capacity of safety valves shall be such as to prevent a rise of pressure in the vessel of more than 10 percent above maximum allowable working pressure, taking into account the effect of static head. Safety valve discharges shall be carried to a safe place.